PPM™ Assurance
Installation and Operation Manual

BURK TECHNOLOGY

PPM Assurance Installation and Operation Manual
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Warranty

Burk Technology, Inc. warrants the PPM Assurance Monitor and PPM Assurance Controller to be free of defects in materials and workmanship for a period of 24 months from the date of purchase. Equipment will be repaired or replaced at the option of Burk Technology and returned freight prepaid to the customer. Damage due to abuse or improper operation or installation of the equipment or caused by fire or flood or harsh environment is not to be covered by this warranty. Damage in shipping is not the responsibility of Burk Technology. A return authorization must be obtained before returning any equipment. Materials returned under this warranty must be shipped freight prepaid and insured in the original shipping carton or suitable substitute to Burk Technology, Inc., 7 Beaver Brook Road, Littleton, MA 01460. Repairs not covered under this warranty will be made at prevailing shop rates established by Burk Technology.

THE WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. BURK TECHNOLOGY, INC. SHALL NOT BE LIABLE TO ANY PARTY FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF THIS EQUIPMENT.

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Introduction

Figure 1. PPM Assurance Monitor.

Figure 2. PPM Assurance Controller.

The PPM™ Assurance Monitor, when paired with a PPM Assurance Controller, can detect the following faults, notify personnel, and in case of encoding loss, take automatic corrective action:

- Loss of PPM encoding (as reported by Arbitron® PPM Monitor alarm relay)
- Loss of PPM encoding (as reported by Arbitron PPM Monitor RS-232 data)
- General failure reported by Arbitron PPM Monitor RS-232 data
- Unknown station ID reported by Arbitron PPM Monitor RS-232 data
- Bypass mode selected on active Arbitron PPM encoder
- Loss of audio programming (silence)*

When operating in Backup Program mode, PPM Assurance can activate alternate programming in order to recover from silence on the primary audio program.

System Requirements

(1) Arbitron Encoding Monitor per encoded station
(2) Arbitron Encoders (primary and backup) per encoded station
(1) Static IP addresses for each PPM Assurance unit
       Default IP Address for PPM Assurance Monitor: 192.168.0.100
       Default IP Address for PPM Assurance Controller: 192.168.0.101

The PPM Assurance platform supports Internet Explorer 7.0 and later and Firefox. Other browsers may work, but they are not supported by Burk Technology.

Fault Detection & Encoder Selection

The table below summarizes how a properly configured PPM Assurance system responds to various types of encoding/audio faults.

	Operating Mode Selected		
	Backup Encoding	**Backup Program**	**Monitor Only**
Primary Encoder Fault Detected	Switches to backup encoder and sends email. Remains on backup until a fault is detected on the backup encoder or until a regularly scheduled test indicates the primary encoder is now online.	Sends email; switches to backup encoder and backup programming via audio selection relays. Remains on backup indefinitely unless a fault is detected on the backup encoder.	Sends email notification.
Backup Encoder Fault Detected	If encoding on primary, sends email notification and continues encoding on primary. If encoding on backup, sends email notification and returns to primary encoder indefinitely.	If encoding on primary, sends email notification and continues encoding on primary. If encoding on backup, sends email notification; switches to primary encoder and primary programming via audio selection relays. Remains on primary indefinitely.	Sends email notification.
No Audio Detected	Sends email notification, if configured to do so. Audio must be manually restored in order to continue encoding.	Sends email notification and toggles PPM Assurance Controller rear panel audio selection relays to select alternate program source.	Sends email notification, if configured to do so. Audio must be manually restored in order to continue encoding.
Unknown Station ID Detected	Sends email notification. Personnel must check tuning of audio monitor and/or Arbitron Encoder audio routing.		

Supported Arbitron Encoder Installations

CRITICAL!!

In all of the below configurations except Monitor Only Mode, the keys on both the primary and backup encoders MUST be set to ENCODE. When using PPM Assurance for automatic encoding recovery, never set an Arbitron Encoder to bypass mode unless you intend to remove it from service. When bypass mode is selected on the Arbitron Encoder, PPM Assurance will automatically disable selection of the bypassed encoder in favor of the non-bypassed encoder.

In-Series Primary/Backup Encoders

The first setup option, which is recommended by Arbitron for typical installations, is where encoders are installed in series, such that program audio is routed to the primary encoder and then passed through to the backup encoder before going to air. In this configuration, PPM Assurance will power the primary encoder as long as encoding is detected on the primary encoder. When a fault occurs, PPM Assurance will power off the primary encoder and power on the backup encoder. **Both encoders must be set to ENCODE (never to BYPASS), with mains power supplied by the rear panel encoder selection outlets on the PPM Assurance Controller.** An Arbitron Encoder installed in this manner will pass audio uninterrupted to the primary encoder even after PPM Assurance turns it off.
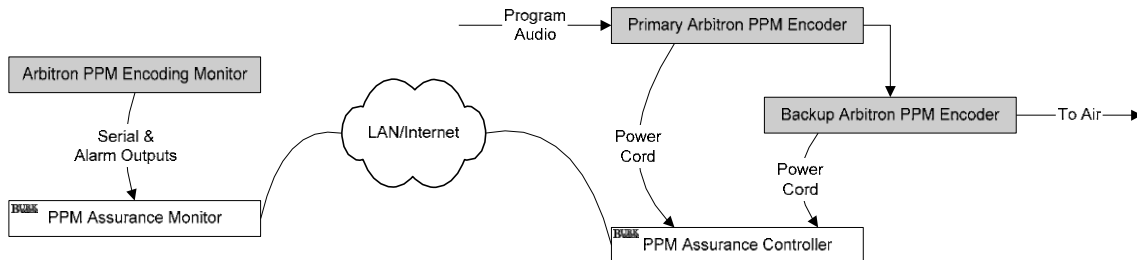

Figure 3. In-series PPM Assurance installation.

Single Program with Simultaneous Encoding ("Hot Standby")

A second configuration option is to supply the same program audio independently to both the primary and backup encoders, and to route the audio output from both encoders to an audio switch. In this configuration, PPM Assurance will activate rear-panel audio selection relays to deselect the primary encoder audio output and select the backup encoder audio output. **Both encoders must be set to ENCODE (never to BYPASS), with mains power supplied by building AC, not by the rear panel encoder selection outlets on the PPM Assurance Controller.**

Figure 4. Simultaneous encoder operation.

Dual Program with Simultaneous Encoding ("Backup Program")

In this configuration option, one source of program audio is supplied to the primary encoder and a second, backup source of program audio is supplied to the backup encoder. The audio output from both encoders is routed to an audio switch. In the event of an encoding failure *or silence,* PPM assurance will activate rear-panel audio selection relays to select the backup encoder to restore both program audio and PPM encoding. **Both encoders must be set to ENCODE (never to BYPASS) with mains power supplied by building AC, not by the rear panel encoder selection outlets on the PPM Assurance Controller.**
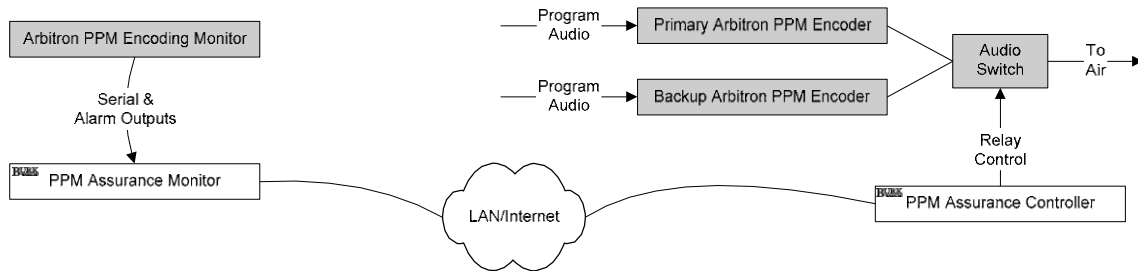

Figure 5. Backup Program operation.
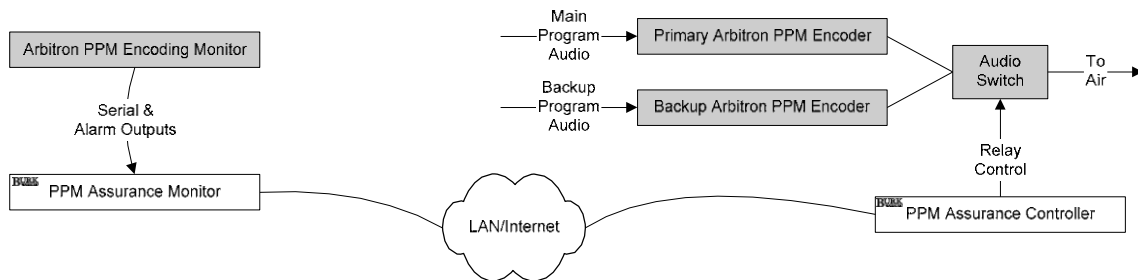
Monitor Only Mode

When PPM Assurance is configured for Monitor Only Mode, Arbitron encoders may be installed in any configuration supported by Arbitron. When Monitor Only Mode is in use, the PPM Assurance Monitor operates without a PPM Assurance Controller and simply provides notification in the event of an encoding failure. No automatic recovery is available in this mode.

Installation

PPM Assurance requires physical connections to both the Arbitron encoding monitor and the Arbitron encoders (although it is possible to install a PPM Assurance monitor in monitor-only mode, without a PPM Assurance Controller). Connections from the Arbitron encoding monitor are made to the PPM Assurance Monitor. Connections from the primary and backup Arbitron encoders are made to the PPM Assurance Controller. It is not necessary for the PPM Assurance Monitor and the PPM Assurance Controller to be co-located. However, static IP addresses are required for both and they must be able to communicate with one another over a LAN/WAN.

Industry standard installation precautions should be observed, including proper grounding, surge protection and provision of uninterruptible power supply.

Cable Requirements

All D-connectors accept standard straight-through DB-9M to DB-9F cables. The rear panel RJ-45 connectors accept standard Cat5e Ethernet cables. Burk Technology supplies cable kits for the PPM Assurance Monitor and PPM Assurance Controller containing a full complement of serial and Ethernet cables (6' lengths). Contact Burk Technology or any Burk dealer for ordering information.

The PPM Assurance Monitor ships with a grounded power cord. The PPM Assurance controller uses an attached grounded power cord.

Station Designations

Because the PPM Assurance Monitor accepts inputs from up to four Arbitron encoding monitors and accepts up to four pairs of L/R audio connections, each type of connector on the rear panel bears a designation of 1, 2, 3 or 4. When you configure the PPM Assurance Monitor, you will assign a name to these station designations and map them to designations on the controller. Be sure that all connections from the PPM Assurance Monitor to any one Arbitron Encoding Monitor all use connectors with the same numeric designation.

The PPM Assurance controller connects to up to two Arbitron encoders and has two sets of primary and backup audio switching relays. When you configure the PPM Assurance Controller, you will assign names to these station designations and map them to the designations on the PPM Assurance Monitor. Be sure that all connections from the PPM Assurance Controller to any one Arbitron Encoder all use connectors with the same numeric designation.

The tables below show one way to match four stations' Encoders and Encoding Monitors to the rear panels of a single PPM Assurance Monitor and to two PPM Assurance Controllers.

Connections to PPM Assurance Monitor

	L/R Audio	Status	Alarm
KAAA	1	1	1
KBBB	2	2	2
KCCC	3	3	3
KDDD	4	4	4

Connections to PPM Assurance Controller A

	Bypass Monitor	Audio Switching*	Primary/Backup Encoder Selection Outlets*
KAAA	1	1	1
KBBB	2	2	2

Connections to PPM Assurance Controller B

	Bypass Monitor	Audio Switching*	Primary/Backup Encoder Selection Outlets*
KCCC	1	1	1
KDDD	2	2	2

*In a typical installation, connections are made either to the audio switching connectors or to the Primary/Backup encoder selection outlets (not both).

Rear Panel Connections (Monitor)

Ethernet. Use a standard Ethernet cable with RJ-45 connectors (included) to connect the PPM Assurance Monitor to your LAN/WAN. If you are installing for the first time, the default IP address for the PPM Assurance Monitor is 192.168.0.100. You will need to resolve any IP address conflicts before powering the unit.

Audio. For each monitored station, the PPM Assurance Monitor accepts a balance source of audio in order to provide silence sensing. Use the included connector blocks to connect left and right audio to the PPM Assurance Monitor.

Status. The status port on the Arbitron Encoding Monitor provides an RS-232 data output that the PPM Assurance Monitor uses to validate encoding. Connect a straight-through serial cable between the status port on the Arbitron encoding monitor and the status port on the PPM Assurance Monitor.

Alarm. When the Arbitron Encoding Monitor detects a loss of encoding, it notifies the PPM Assurance Monitor using the Alarm port. Connect a straight-through serial cable between the alarm port on the Arbitron encoding monitor and the alarm port on the PPM Assurance Monitor.

Relay. The rear panel Form C relay allows output to an external remote control or another signaling device and can be configured to de-energize when one of several conditions is detected.

Power. Use the supplied power cord to connect AC power to the PPM Assurance Monitor. Proper surge protection and use of a UPS is strongly recommended. The power supply is protected by a field-replaceable 1A fuse. When you power the PPM Assurance Monitor for the first time, before any stations are configured, all LEDs will be amber.

Rear Panel Connections (Controller)

*Note: On the rear panel of the PPM Assurance Controller, primary connections are designated **P** and backup connections are designated **B**.*

Ethernet. Use a standard Ethernet cable with RJ-45 connectors (included) to connect the PPM Assurance Controller to your LAN/WAN. If you are installing for the first time, the default IP address for the PPM Assurance Controller is 192.168.0.101. You will need to resolve any IP address conflicts before powering the unit.

Bypass Monitor. When the Arbitron Encoder is in bypass mode, it notifies the PPM Assurance Controller using the bypass monitor port. Connect a straight-through serial cable between the bypass monitor port on the Arbitron encoder and the bypass monitor port on the PPM Assurance Monitor.

Audio Switching. In order to drive encoder selection by means of an external audio switch, the PPM Assurance Controller has two pairs of Form C relays, designated as Primary 1, Backup 1, Primary 2 and Backup 2. If you supply program audio to both the primary and backup encoders and run the encoders simultaneously, the Audio Switching relays allow for control of a user-supplied audio switch for purposes of determining whether the primary encoder's audio goes to air or the backup encoder's audio goes to air.

Relay. The rear panel Form C relay allows output to an external remote control or another signaling device. The relay is normally energized. When one of several fault conditions is detected, the relay de-energizes. See page 14 for information on configuring the relay behavior.

Encoder Selection Outlets. When the primary and backup PPM encoders are installed in series, with program audio routed from the primary encoder to the backup encoder, the PPM Assurance controller manages encoder selection by applying power to the active encoder and removing power from the inactive encoder. Do not use the encoder selection outlets if you are instead running both encoders simultaneously and using the rear panel audio selection relays to control audio selection by means of a user-supplied audio switch.

Configuration

The PPM Assurance Monitor and PPM Assurance Controller are configured by means of embedded web servers. Complete configuration for the PPM Assurance Monitor first. Then configure the PPM Assurance Controller.

After entering new settings on each page of the built-in web site, press the Save button.

PPM Assurance Monitor Configuration

Log into the PPM Assurance Monitor by navigating to its IP address in a standard web browser. If you are installing for the first time, the default IP address is 192.168.0.100.

The default username is **admin** and the default password is **password.**

Network Settings

Use the Network Settings page to establish the network parameters that will allow the PPM Assurance monitor to communicate on your LAN/WAN. Keep in mind the PPM Assurance Monitor must be able to communicate with the PPM Assurance Controller. If you don't know what settings to use, contact your network administrator.

Encoding Timeout

The Encoding Timeout value is the amount of time the PPM Assurance system will wait for the "Codes Detected" status from the Encoding Monitor after the backup PPM Encoder is powered on. The default value of 400 seconds allows operation with both first and second generation PPM Encoders. If only first generation encoders are in use, the Encoding Timeout value can be reduced to 210 seconds.

After saving changes, you will be required to log in again. If the new IP address and port are not accessible from your current network location, you will receive a 404 error when the browser automatically refreshes. If this happens, be assured that the changes were saved correctly.

Email Settings

Server Settings

PPM Assurance uses email notification as its primary means of reporting conditions to PPM stakeholders. In order to generate email, the PPM Assurance monitor needs to be configured with the server name, port, username and password of an SMTP server.

Email Limits

If there is a need to limit the number of email messages sent by PPM Assurance (e.g. when using pay-per-message SMS), use the Email Limits configuration area to meter the emails generated by PPM Assurance. Once the email limit has been reached, no more emails will be sent. However, activity is still viewable on the web page and in the exception log.

Email Addresses

Use the Email Addresses configuration page to determine where the PPM Assurance monitor delivers email notifications. A notification is sent when PPM Encoding status changes, when PPM Assurance has taken action to restore encoding, when a routine encoder test has failed and, optionally, when silence has been detected.

After saving the email address, you may use the test button to verify that PPM Assurance is properly configured to send email to the address.

To add a new email address, click **New.** Enter the email address where prompted. Click **Save** when you are done.

To edit an email address, click on the email address in the list. After you have made changes, click **Save.**

To delete an email address, click on the email address in the list and then click **Delete.**

Users

Access the Users page to set up a list of users who will be able to log in to PPM Assurance. Create, edit and delete users in the same way as email addresses are created, edited and deleted (see above).

In the **Permission** field, select the privilege level for the user. System-level users have full administrative and operational privileges. Operators may log in, view conditions and change operating mode (Primary Only, Backup Only or Automatic), but they cannot edit system configuration. Observers can view system status only.

Note: the admin account cannot be deleted.

Time Settings

Time Settings

Set Time

| Date: | January | 26 | 2015 |
| Time: | 00 | 43 | 24 |

[Set]

Time Zone

Standard time abbreviation:	STD	(e.g. EST)
Daylight time abbreviation:	DST	(e.g. EDT)
Enable DST:	☑	

Daylight Saving Settings

DST start:	Fourth	Wednesday	in	April	at	04:00
DST end:	Last	Thursday	in	September	at	05:00
DST offset:	1:00					

[Save]

The Time Settings is where you set the system time and configure time zone and Daylight-Saving Time settings.

Enter the current 24-hour time in the time zone of the PPM Assurance Monitor.

Enter the standard time zone abbreviation (for example, EST, PST) and the time zone abbreviation during DST (for example, EDT, PDT). The time zone appears on the exception report and in email notifications and reports. Check the box marked **Enable DST** if Daylight-Saving Time is observed at this location at any time during the year.

Under Daylight Saving settings, enter the starting and ending dates and times of Daylight-Saving Time and the number of hours/minutes of the DST offset (1:00 in most locations).

Alarm Relay

Alarm Relay Configuration

	WGDH-FM	Station 2	Station 3	Station 4
Alarm when encoding on backup	☑	☐	☐	☐
Alarm when not encoding	☑	☐	☐	☐
Alarm on silence	☑	☐	☐	☐

[Save]

The Alarm Relay Page is where you configure the conditions that will de-energize the rear panel alarm relay. The relay is energized when the unit is powered unless any of the conditions you select on this page are true.

Alarm When Encoding on Backup

When you check any of the boxes in this row, operation of the backup encoder on any of the corresponding stations will de-energize the alarm relay. Checking this box requires that the alarm relay also de-energize when no encoding is detected on *either* the primary or backup encoder.

Alarm When Not Encoding

When you check any of the boxes in this row, a fault resulting in total loss of encoding on any of the corresponding stations will de-energize the alarm relay.

Alarm On Silence

When you check any of the boxes in this row, audio silence on any of the corresponding stations will de-energize the alarm relay.

Station Settings

The Station Settings pages are where you map the PPM Assurance Monitor to the appropriate PPM Assurance Controller(s), name each station, and configure station-specific settings.

Mode

Unless a station is disabled, PPM Assurance operates in one of three modes: Backup Encoding, Backup Program or Monitor Only.

Choose Backup Encoding if the same program audio is fed to both encoders. When an encoding failure occurs, PPM Assurance will switch to the backup encoder and the change will be transparent to listeners.

Choose Backup Program if encoders are supplied different audio. For example, the main program is supplied to the primary encoder and alternate programming is supplied to the backup encoder. When an encoding failure occurs, PPM Assurance will toggle encoders and listeners will hear the alternate audio. **When Backup Program mode is in use, PPM Assurance does not perform periodic tests of the backup encoder. This avoids unnecessary disruption to the program audio.**

Choose Monitor Only if the PPM Assurance Monitor will not be connected to any PPM Assurance Controller. PPM stakeholders can receive email notifications of encoding loss and silence conditions, but no encoding recovery is possible without a PPM Controller.

Station Name

Identify by the station associated with all the corresponding rear panel inputs. When naming Station 1 for example, enter the name of the station whose off-air audio is connected to L/R audio ports marked with the number 1.

Controller IP/Hostname & Controller Port

Enter the IP address or host name and the controller port of the controller that connects to the encoder pair associated with this station.

Controller Station

Enter the controller station number (1 or 2) associated with the controller's rear panel connections for this station. For example, if the encoder Bypass Monitor port is connected to the controller's Bypass Monitor port marked 2, select number 2 for the controller station.

Silence Sensing

Check the box marked Enable Silence Sensing if you have connected a source of off-air audio to the rear panel Audio connector associated with this station on the PPM Assurance Monitor and wish for silence detection to trigger email notifications.

Enter the threshold in dBFS below which the PPM Assurance Monitor reports a loss of program audio. Then, under **Delay**, enter the amount of time the PPM Assurance Monitor should wait before reporting the loss of program audio.

Check the box marked **Stereo** if both left and right audio channels are connected to the rear panel. If only a single audio channel is used, leave this box unchecked.

Check the box marked **Send email** if you want PPM Assurance to send email to its notification list when silence is detected.

Automatic Test

The Automatic Test configuration parameters are available when Backup Encoding mode is selected. When Backup Program is selected, testing is not conducted. In Monitor Only mode, where there is no PPM Assurance Controller, testing is not possible.

Check the box marked **Test backup encoder** to enable backup tests. Backup testing activates the backup encoder long enough to verify that it is functioning properly (less than four minutes). The primary encoder is re-selected immediately thereafter.

Use the **Frequency** and **Time of Day** settings to determine how often PPM Assurance tests the backup encoder and at what time of day it will do so.

In the **Send email** field, choose whether you want to receive email notifications only when a test fails or after each test. Sending email after each test not only confirms the backup test took place as scheduled, but also helps verify that the email server is available to PPM Assurance.

PPM Assurance Controller Configuration

Log into the PPM Assurance Controller by navigating to its IP address in a standard web browser. If you are installing for the first time, the default IP address is 192.168.0.101.

The PPM Assurance Controller responds to the 'admin' username and password only. If you have changed the admin password in the PPM Assurance Monitor but have not updated it in the PPM Assurance Controller, you will need to log in to the controller with the older admin password.

The admin password may be kept up to date by changing it under the Network Settings page.

Network Settings

Use the Network Settings page to establish the network parameters that will allow the PPM Assurance Controller to communicate on your LAN/WAN. Keep in mind the PPM Assurance Controller must be able to communicate with the PPM Assurance Monitor. If you don't know what settings to use, contact your network administrator.

If you need to update the administrator password, enter it (and confirm it) in the spaces provided. It is generally a good idea to use the same admin password for both the monitor and controller(s), and to update the controller(s) after any password changes in the monitor.

Network Settings

Field	Value
IP Address:	192.168.0.103
Subnet Mask:	255.255.255.0
Gateway:	192.168.0.1
Primary DNS:	192.168.0.1
Backup DNS:	192.168.0.1
HTTP Port:	80
Port:	45100
Change Password?	☐
Admin Password:	
Confirm:	

Save

After saving changes, you will be required to log in again. If the new IP address and port are not accessible from your current network location, you will receive a 404 error when the browser automatically refreshes. If this happens, be assured that the changes were saved correctly.

Station Settings

The Station Settings pages are where you map the PPM Assurance Controller to the appropriate PPM Assurance Controller(s) and name each station for identification purposes.

Start by checking the box marked **Enabled** if this station will be in use.

Station Name

Identify by the station associated with all the corresponding rear panel inputs. When naming Station 1 for example, enter the name of the station whose off-air audio is connected to L/R audio ports marked with the number 1.

Monitor IP/Hostname & Monitor Port

Enter the IP address or host name and the controller port of the controller that connects to the encoder pair associated with this station.

Monitor Station

Enter the monitor station number (1-4) associated with the monitor's rear panel connections for this station.

Alarm Relay

Station Settings

Enabled:	☑
Station Name:	WGDH-FM
Monitor IP/Hostname:	192.168.0.1
Monitor Port:	45001
Monitor Station:	1 ⌄

Alarm Relay Activation

Alarm when encoding on backup	☐
Alarm when not encoding	☑

[Save]

The Alarm Relay Page is where you configure the conditions that will de-energize the PPM Controller rear panel alarm relay. The relay is energized when the unit is powered unless any of the conditions you select on this page are true. Note that this relay is separate and independent from the alarm relay on the PPM Assurance Monitor.

Alarm When Encoding on Backup

When this box is checked, operation of the backup encoder on any of the corresponding stations will de-energize the alarm relay. Checking this box requires that the alarm relay also de-energize when no encoding is detected on *either* the primary or backup encoder.

Alarm When Not Encoding

When this box is checked, a fault resulting in total loss of encoding on any of the corresponding stations will de-energize the alarm relay.

Restoring Default Configuration

To restore default configuration on either the PPM Assurance Monitor or the PPM Assurance Controller, press and hold the rear panel Master Initialization button for several seconds. The front panel LEDs will turn amber to indicate that all user configuration has been cleared. This process will restore the default IP addresses of 192.168.0.100 and 192.168.0.101 for the PPM Assurance Monitor and PPM Assurance Controller, respectively.

Operation

Front Panel LEDs

The front panel of the PPM Assurance Monitor and PPM Assurance controller provide quick indications for encoding status, audio presence and UDP link presence.

The following table shows the various conditions the LEDs may represent:

	Green	Red	Amber	Off
Primary	Encoding on Primary Encoder	Fault detected on Primary Encoder	Backup encoder selected during routine test. No primary encoder fault.	Station not configured or user has manually selected Backup Encoder.
Backup	Encoding on Backup Encoder	Fault detected on Backup Encoder	Backup Encoder on Standby	Station not configured or user has manually selected Primary Encoder.
Audio	Audio Detected	Audio Not Detected	N/A	Station Not Configured or Silence Sensing Not Enabled
Link	UDP Link Detected Between PPM Assurance Monitor and PPM Assurance Controller	UDP Link Not Detected Between PPM Assurance Monitor and PPM Assurance Controller		Station Not Configured

- A flashing green LED indicates the encoder is newly selected and encoding has not been verified. After encoding is verified, the LED will turn solid green.

- A flashing red LED indicates the encoder is selected, but the monitor has not detected encoding. This will happen if both encoders have failed.

- If the LED alternates between red and green, there is a fault unrelated to the encoder status (e.g., silence or unknown station).

- Note: On initial power up, before any stations have been configured, all LEDs are colored amber. The same is true after a master initialization is performed using the rear panel pushbutton.

Switching Mode

On the system status page, three switching modes are available for selection: **Automatic, Primary Only,** or **Backup Only.** This is different from the mode configuration available from the Configuration page. The Switching Mode selection on the System Status page determines whether the monitor operates in automatic mode (it will toggle encoders as appropriate when a fault is detected), Primary Only (the monitor will never select the backup encoder) or Backup Only (the monitor will never select the primary encoder.

Leave PPM Assurance in Automatic Mode unless there is a known problem with the primary or backup encoder. In that case, select Primary Only or Backup Only so that only the remaining good encoder is available for encoder selection.

A detailed explanation of PPM Assurance behavior under Automatic mode is located on page 2.

Resetting Primary Encoding After a Fault

After a fault is detected on the primary Arbitron Encoder, PPM Assurance will not select the primary encoder for encoding unless a fault is subsequently detected on the backup encoder. It is safe to continue encoding on the backup encoder indefinitely. If you wish to restore primary encoding (for troubleshooting or any other purpose), log in to the PPM Assurance Monitor and click the RESET link that appears next to the primary encoder's LED indicator. This link appears only when the encoder has been de-selected after a fault.

Reviewing the Exception Log

In order to consolidate PPM Assurance activity and to create a central audit trail, PPM Assurance includes a exception log which may be used to view the most recent 100 exceptions for any station (routine test failures, encoding faults, silence and UDP link errors), or the most recent 100 exceptions overall. The oldest events are deleted to make room for new ones.

Click the **Exception Log** link to access the exception log. You may then view exceptions all at once or by station.

Help & Support

Uploading Firmware

To upload a new version of firmware to the PPM Assurance Monitor or PPM Assurance Controller, start by logging onto the web-based interface. Once logged on, navigate to **http://[IP Address]/upload/,** where [IP Address] is replaced with the IP address of the PPM Assurance monitor or controller (for example, http://192.168.0.99/upload/).

Use the **Browse…** button to locate the desired firmware version. Then Click **Upload** to save the new version to the unit. The unit will then reboot with all LEDs dark, and after about 15 seconds, the unit will reboot again. The process takes about 30 seconds.

Specifications

Alarm & Audio Relays
Form C Relays, 5A @ 120VAC.

Audio Inputs
Max. +20dBu, user-configurable silence threshold.

AC Power Outlets
20A total load, all outlets combined. Fuse-protected.

Contacting Support

If you need help, do not hesitate to contact Burk Technology customer support at 978-486-3711, or by email to support@burk.com.

Should your system ever require repair, we provide same-day service. Please contact us for a Return Authorization.